Recorded water levels in this bulletin are derived from a representative network of water level gages on each lake (see cover map). Providers of these data are the National Ocean Service, National Oceanic and Atmospheric Administration, U.S. Department of Commerce, and the Integrated Science Data Management, Department of Fisheries and Oceans, Canada. Historic and projected lake levels are derived by the Detroit District, U.S. Army Corps of Engineers and Environment Canada, under the auspices of the Coordinating Committee on Great Lakes Basic Hydraulic and Hydrologic Data.

This bulletin is produced monthly as a public service. Tables of possible storm-induced rises at key locations on the Great Lakes are available on request. The Corps also publishes the "Great Lakes, Connecting Channels and St. Lawrence River Water Levels and Depths," twice monthly, which provides a forecast of depths in the connecting rivers between the Great Lakes and the International Section of the St. Lawrence River. These publications can be obtained free of charge by writing to the address shown on the front cover, or by calling (313) 226-6441. Notices of change of address should include the name of the publication(s). All of these publications can be accessed on the Internet at **http://www.lre.usace.army.mil/glhh.**

Great Lakes Basin Hydrology
July 2011

Overall, the Great Lakes basin experienced above average precipitation during the month of July. Lake Superior received below average precipitation totaling 94% of average, while Lake Michigan-Huron received above average precipitation accumulating 107% of average for the month. Lake Erie received above average precipitation with 119% of average and Lake Ontario received about average precipitation at 99%. Over the past 12 months, precipitation on all of the lakes has been above average. During July, the net supply of water was above average for Lakes Superior and Erie, while the net supply was below average for Lakes Michigan-Huron and Ontario. Outflows from Lakes Superior and Michigan-Huron were below average in July while outflows from Lakes Erie and Ontario were above average. The tables below list July precipitation, water supply, and outflow information for the entire Great Lakes basin.

A comparison of July monthly mean water levels to long-term (1918-2010) averages show that Lakes Superior and Michigan-Huron were 10 and 13 inches, respectively, below average. Lakes St. Clair, Erie, and Ontario were 1, 7 and 6 inches above average, respectively.

PRECIPITATION (INCHES)

BASIN	July				12-Month Comparison			
	2011	Average (1900-2008)	Diff.	% of Average	Last 12 Months	Average (1900-2008)	Diff.	% of Average
Superior	3.09	3.28	-0.19	94	32.55	30.51	2.04	107
Michigan-Huron	3.23	3.03	0.20	107	35.02	32.44	2.58	108
Erie	4.02	3.39	0.63	119	41.73	35.40	6.33	118
Ontario	3.14	3.17	-0.03	99	37.33	35.71	1.62	105
Great Lakes	3.29	3.15	0.14	104	35.52	32.64	2.88	109

LAKE	July WATER SUPPLIES[1] (cfs)		July OUTFLOW[2] (cfs)	
	2011	Average[4] (1900-2008)	2011	Average[3] (1900-2008)
Superior	142,000	129,000	61,000	81,000
Michigan-Huron	120,000	128,000	178,000	195,000
Erie	11,000	7,000	220,000	209,000
Ontario	9,000	24,000	296,000	261,000

Notes: Values (excluding averages) are based on preliminary computations. CFS denotes cubic feet per second.

[1] Negative water supply denotes evaporation from lake exceeded runoff from local basin.

[2] Does not include diversions.

[3] Niagara and St Lawrence rivers average outflows are based on period of record 1900-1989 and 1900-2005, respectively

[4] Lakes Erie and Ontario average water supplies based on 1900-1989